



November 13, 2009

US EPA, Region 1  
PWTF GP Processing  
Municipal Assistance Unit (CMU)  
1 Congress Street, Suite 1100  
Boston, Ma. 02214-2023

Re: BROCKTON WATER/ DMR (MAG640029) NOI

Dear Sir or Madam:

Enclosed please find the Brockton Water Filtration Plant NOI submission for MAG640029.

Should you have any questions please do not hesitate to call me @ (781) 679-0677 or (781) 447-2124.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael D. Sessine", written over a horizontal line.

Michael D. Sessine  
Project Manager  
Brockton Water Plant

MDS

Enc;

cc: Ms. Kathleen Keohane, Office of Watershed Management

Enc:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND - REGION I  
ONE CONGRESS STREET, SUITE 1100  
BOSTON, MASSACHUSETTS 02114-2023

Request for General Permit Authorization to Discharge Wastewater  
(Notice of Intent to be covered by the General Permit (NOI))

Potable Water Treatment Facility (PWTF)  
NPDES General Permit No. MAG640000 and NHG640000

A. Facility Information TRANSMITTAL # W067500

1. Facility Owner:

Name City of Brockton e-mail mthoreson@ci.brockton.ma.us  
Street/PO Box 45 School Street/City Hall City Brockton  
State Massachusetts Zip Code 02301  
Contact Person Michael L. Thoreson Telephone Number 508 580 7135

2. Facility Operator (if different from above):

Name Veolia Water NA NE LLC e-mail (optional) keavin.nelson@veoliawaterma.com  
Street/PO Box 1115 West Chestnut City Brockton  
State Massachusetts Zip Code 02301  
Contact Person Keavin Nelson Telephone Number 508 894-0044

3. Facility Data (attach topographic map or other map showing facility and discharge location(s)):

Name Brockton Water Filtration Plant e-mail (optional)  
Street/PO Box 55 Cinder Lane City Pembroke  
State Massachusetts Zip Code 02359  
Contact Person Michael D Sessine Telephone Number 781 679-0677  
Facility Latitude N42.01344 Facility Longitude W70.78782

4. Standard Industrial Classification (SIC Codes) and Descriptions of Processes:

SIC Code(s) 4941  
Description(s) Drinking Water - Water Treatment Plant Transmittal # W067500

5. Current Permitting Status (please check yes or no):

1. Has a prior NPDES permit been granted for the discharge? Yes ☒ (Permit Number: MAG640029)  
No ☐  
2. Is the discharge a "new discharge" as defined by 40 CFR Section 122.22? Yes ☐ No ☒  
3. Is the facility covered by an individual NPDES permit? Yes ☐ (Permit Number ) No ☒  
4. Is there a pending application on file with EPA for this discharge? Yes ☐ (Date of submittal: ) No ☒

B. Discharge Information

1. Name of Receiving Waterbody Silver Lake  
2. Type of Receiving Waterbody (e.g. stream, lake, reservoir, estuary etc) Reservoir  
3. State Water Quality Classification: A Freshwater: X Marine Water:   
4. Describe the discharge activities for which the owner/applicant is seeking coverage, including process discharges not specifically authorized in the PWTF GP which need to be authorized for discharge (and which attain the

effluent limits and other conditions of the general permit). This description should include all treatment methods used on the wastewater prior to discharge including lagoons, baffles, filter presses etc. If lagoons are used at the facility, please include the number and size of lagoons; the size and elevation of the entry pipe; the time of travel from the entry point of the discharge into the lagoon to the entry point to the receiving water; and the length of backwash cycle for any combination of number of filters. (attach extra sheets if necessary):

Backwash water, gravity thickener supernate and drying bed filtrate flows to a diverter box and subsequently into two lagoons. The water enters the lagoons at the west end in parallel and flows to the east end over a set of stop logs into a discharge box allowing the residuals to settle out. From there it flows over a common set of stop logs and into a pipe and into Silver Lake (source). The residuals are drawn off of the sedimentation basins for two hours per day and sent to a gravity thickener tank. From there the residuals settle and are pumped to a series of drying beds. The drying bed filtrate is sent either to the lagoons or directly to the head works. The gravity thickener supernate flows over a set of weirs and to the lagoons. Presently we are recycling where the filtrate and supernate water is sent in series through the lagoons to a pump intake located in the west end of lagoon # 2 where it is pumped back to the head works. The permit is necessary in the event of system failure or a maintenance event at which point discharge to the lake would become necessary.

5. Please provide a diagram depicting the treatment methods, outfalls, and receiving water.

6. Number of outfalls: 1 Latitude and Longitude for each outfall (attach additional pages if necessary)  
OUTFALL # Latitude 42.0119 Longitude -70.4846  
OUTFALL # Latitude \_\_\_\_\_ Longitude \_\_\_\_\_

For each outfall:

7. What is the proposed sampling location(s) and proposed consistent times of the month for collecting samples:

At the common basin to single discharge pipe. Once per week starting with the first Saturday of the month.

### C. Effluent Characteristics

1. List here and attach information on any water additives used at the facility (Including chemicals for pH adjustment, dechlorination, control of biological growth, and control of corrosion and scale in water pipes): PCH 180 - coagulant.

Sodium Hydroxide - PH adjustment, Sodium Hypochlorite - disinfection, Phosphate Ortho Poly Blend - corrosion control & sequestration

2. Please report here any known remediation activities or water-quality issues in the vicinity of the discharge.

3. Are aluminum-containing coagulants used at this facility? Yes ☒ No \_\_\_\_\_

4. Does the discharge contain residual chlorine? Yes ☒ No \_\_\_\_\_

5. Does the facility provide treatment to remove arsenic from the raw water source? Yes \_\_\_\_\_ No ☒

6. Are phosphorus-containing chemicals added to the treated water at this facility? Yes ☒ No \_\_\_\_\_

7. All applicants must attach a separate sheet listing all laboratory results (minimum of five) for total recoverable aluminum (in micrograms per liter) taken within the last six months. Do not include dilution when recording your results. See Section 4.4.5 of General Permit for more information.

8. Please include the following effluent data for each outfall:

Characteristic (report if measured)	Average Monthly	Maximum Daily
Discharge Flow (gpd)	_____	_____
TSS (mg/l)	_____	_____
pH (s.u.)	(min) _____	(max) _____
Total Recoverable Aluminum (ug/l)	_____	_____
Total Residual Chlorine (ug/l)	_____	_____

(continued on next page)



8. Continued

Characteristic (report if measured)

Whole Effluent Toxicity (%) LC50 \_\_\_\_\_ and/or C-NOEC \_\_\_\_\_

9. If the discharge contains aluminum and/or residual chlorine, please provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water, the dilution factor, and attach any calculations used to support stream flow and dilution calculations (See Appendix VII for dilution calculations and additional information):

7Q10 N/A cfs Dilution Factor 10:1 cfs

**D. Endangered Species Act Eligibility**

1. Using the instructions in Appendix I of the PWTF GP, under which criterion listed in Part II are you eligible for coverage under this general permit?  
A ☒ B ☐ C ☐ D ☐ E ☐ F ☐
2. If you selected criteria D or F, has consultation with the federal services been completed? Yes ☐ No ☐
3. If consultation with U.S. Fish and Wildlife Service and/or NOAA Fisheries Service was completed, was a written concurrence finding that the discharge is "not likely to adversely affect" listed species or critical habitat received? Yes ☐ No ☐
4. Attach documentation of ESA eligibility as described below and required at Part 3.4.1 and Appendix I, Part III, Step 4, of the General Permit.

*Criterion A - No federally-listed threatened or endangered species or federally-designated critical habitat are present:* A copy of the most current county species list pages for the county(ies) where your site or facility and discharges are located. You must also include a statement on how you determined that no listed species or critical habitat are in proximity to your site or facility or discharge locations.

*Criterion B - Section 7 consultation completed with the Service(s) on a prior project:* A copy of the USFWS's and/or NMFS's, as appropriate, biological opinion or concurrence on a finding of "unlikely to adversely effect" regarding the ESA Section 7 consultation.

*Criterion C - Activities are covered by a Section 10 Permit:* A copy of the USFWS's and/or the NMFS's, as appropriate, letter transmitting the ESA Section 10 authorization.

*Criterion D - Concurrence from the Service(s) that the discharge is "not likely to adversely affect" federally-listed species or federally-designated critical habitat (not including the four species of concern identified in Section I of Appendix I):* A copy of the USFWS's and/or the NMFS's, as appropriate, letter or memorandum concluding that the discharge is consistent with the general permit's "not likely to adversely affect" determination.

*Criterion E - Activities are covered by certification of eligibility:* A copy of the documents originally used by the other operator of your site or facility (or area including your site) to satisfy the documentation requirement of Criteria A, B, C or D.

*Criterion F - Concurrence from the Service(s) that the discharge is "not likely to adversely affect" species of concern, as identified in Section I of Appendix I:* A copy of the USFWS and/or the NMFS, as appropriate, concurrence with the applicant's determination that the discharge is "not likely to adversely affect" listed species.

## E. National Historic Properties Act Eligibility


1. Using the instructions in Appendix III of the PWTF GP, under which criterion listed in Part III are you eligible for coverage under this general permit?

1 ☒ 2 ☐ 3 ☐

2. Have any State or Tribal historic preservation officers been consulted in this determination? Yes ☐ No ☒  
If yes, attach the results of the consultation(s).

## F. Certification

I certify that the discharge for which I am seeking coverage under the general permit consists solely of a surface water discharge from a potable water treatment facility. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature  Digitally signed by Michael D Sessine  
Date: 2009.11.11 09:57:37 -05'00' Date 11/11/09  
Printed Name and Title Michael D Sessine

Federal regulations require this application to be signed as follows:

1. For a corporation, by a principal executive officer of at least the level of vice president;
2. For partnership or sole proprietorship, by a general partner or the proprietor, respectively, or,
3. For a municipality, State, Federal or other public facility, by either a principal executive officer or ranking elected official.

Note: Permits No. MAG640000 and NHG640000 may be found at [www.epa.gov/region1/npdes/pwtfgp.html](http://www.epa.gov/region1/npdes/pwtfgp.html)

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## Silver Lake, Massachusetts

Silver Lake is a reservoir located in Plymouth County, at N42.01344° W70.78782° (NAD83) and at an elevation of 52 ft MSL.

Feature Type: Reservoir  
Latitude: N42.01344° (NAD83 datum)  
Longitude: W70.78782°  
Elevation: 52 ft MSL  
County: Plymouth County,

USGS 24K Map:  
USGS 24K MRC:

You can view this location or feature in our [Topographic Map Viewer](#) now.

*Note: Coordinates displayed above are referenced to NAD83 datum.*

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**Latitude:**

42°01'19"

**Longitude:**

-70°48'46"

## LEGEND

- Toxic release
- Cities
- Railroads
- Streets
- Major roads
- Local streets
- Water bodies
- Streams
- States
- Counties

[Map](#) [Map over Photo](#) [Photo](#) [TopoMap](#) ☐ [Locator Map](#)

**Your goal:** Get the center of your facility's production area centered in the map/photo window at the maximum zoom level. This will allow you to get the most precise coordinates.

**Zoom-in/out:** Select Zoom In, Zoom Out Bar on the right side.

**Recenter:** When you are not at the maximum zoom-in level, click on the map/photo to center.

**Move map/photo:** Click the arrow controls around the map/photo window to move in the direction you choose (North, South, East or West or NW, NE, SW, SE).

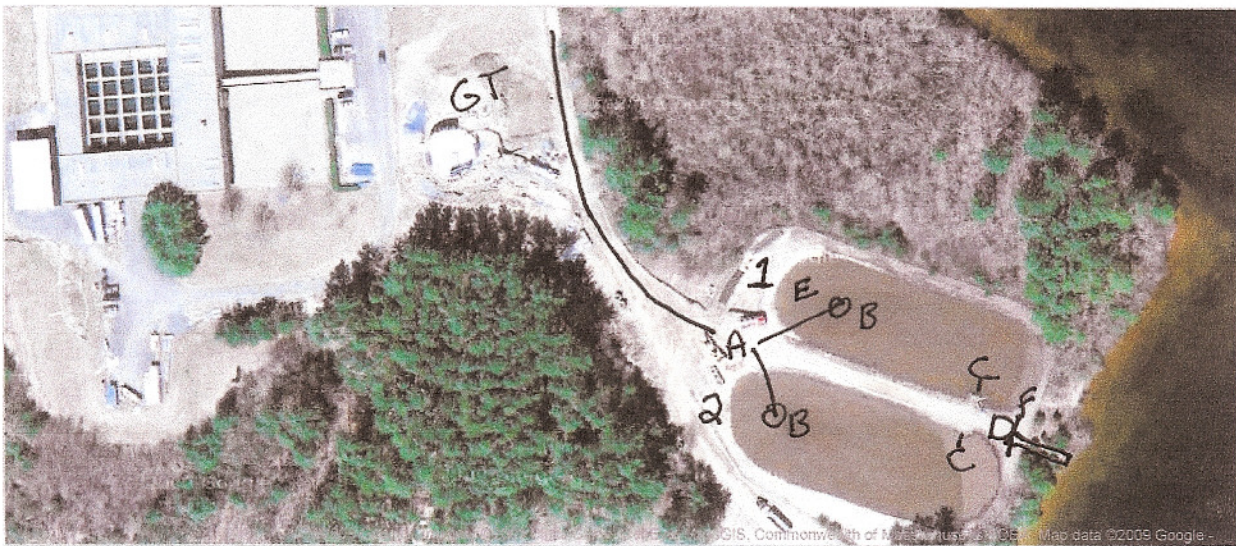
**Mark location:** Once you are at the maximum zoom-in level, click the center of the facility production area on the photo. This will mark the coordinates in the Latitude and Longitude fields.

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Last updated on Tuesday, March 02, 2004  
URL: <http://epamap20.epa.gov/tri/emtri.asp>





halifax ma

A. DIVERTER BOX

B. RISER WHERE WATER ENTERS LAGOONS

C. STOP LOGS

D. DISTRIBUTION BOX / DISCHARGE PIPE

E. RECYCLE PUMP INTAKE

F. RECYCLE STOP LOGS

SCENARIO 1 - RECYCLING: BACKWASH WATER ENTERS 2B, FLOWS OVER STOP LOGS 2C, ENTER LAGOON 1 AT 1C AND FLOWS TO RECYCLE PUMP INTAKE E WHERE IT IS SENT BACK TO HEAD WORKS. RESIDUALS FROM SEDIMENTATION BASINS ENTER THE GRAVITY THICKENER WHERE THE SETTLED RESIDUALS ARE PUMPED TO THE DRYING BEDS & THE SUPERNATE FLOWS TO THE LAGOONS IN THE SAME PATTERN.

SCENARIO 2 - DISCHARGE: DISCHARGE WILL ONLY OCCUR SHOULD AN ISSUE ARISE WITH RECYCLE. WATER ENTERS THE LAGOONS AT 1B & 2B. FROM THERE IT FLOWS OVER THE STOP LOGS C AND INTO THE COMMON DISCHARGE BOX, INTO A PIPE WITH FLOW METER, AND OUT TO LAKE. SAMPLE WILL BE TAKEN FROM WATER FLOWING OVER D BOX STOP LOGS COMMON TO BOTH LAGOONS.

SCENARIO 3 - A COMBINATION OF 1 & 2.

[http://maps.google.com/maps?t=p&utm\\_campaign=en&utm\\_medium=ha&utm\\_source=e...](http://maps.google.com/maps?t=p&utm_campaign=en&utm_medium=ha&utm_source=e...) 11/11/2009



NPDES GP MAG640029 DATA 2009

	PH		TSS		Aluminum	Flow/MGD	Chlorine	
	Min	Max	MO AVG	Daily Max	Daily Max	Daily Max	MO Avg	Daily Max
an-09	6.3	7.2	5	10	0.6	0.684	42	100
eb-09	6.69	6.7	3	5	0.039	0.439	52	80
lar-09	6.4	6.7	7	11	1.02	0.554	45	140
pr-09	6.2	6.5	9	12	0.5	0.55	5	20
lay-09 *	7.4	7.4	2	2	0.18	0.682	10	10
une-09 **	See table	**	**	**	**	**	**	**
ul-09	**	**	**	**	**	**	**	**
ug-09	**	**	**	**	**	**	**	**
ep-09	**	**	**	**	**	**	**	**
ct-09	**	**	**	**	**	**	**	**
ov-09	**	**	**	**	**	**	**	**
ec-09								
VG	6.6	6.9	5.2	8.0	0.5	0.582	31	70

Table:	
*	limited Samples (single sample), Start of Recycle
**	No Flow - Recycling back to head works.
	Maximum
	Minimum
	Average

Note: recycle system went on line in early May 2009. Process coagulant was changed from Aluminum Sulfate/Sodium Hydroxide combo to PCH 180.